1008-164 Rheolytic Thrombectomy versus Surgical Embolectomy For Treatment of Thrombosed Hemodialysis A-V Grafts and Peripheral Vessels: Results From A Prospective, Multi-Center Study

S.R. Ramee, for the Possis Peripheral AngioJet® Study Investigators. *Ochsner Clinic, New Orleans, LA, USA*

We have previously demonstrated the safety and efficacy of AngioJet® catheter in removing intra-arterial thrombus by rheolytic thrombectomy (RT). The aim of the phase II study was to compare the efficacy of RT to Fogarty balloon embolectomy (FBE) in treatment of thrombosed hemodialysis A-V grafts (n = 118) and peripheral vessels (n = 19). The study included 136 pts (137 lesions) prospectively randomized to RT (n = 75) or FBE (n = 62). Quantitative angiography was performed in a core lab by automated edge detection technique. We measured angiographic success (reduced thrombus burden), clinical success (restoration of blood flow without major complication), and thrombus burden (ideal vessel area – measured lumen area/ideal area × 100). Freedom from adverse events (rethrombosis, restenosis, or repeat percutaneous or surgical intervention) at 30 and 180 days was also compared.

Results:

	RT (n = 75)	FBE (n = 62)	p value
Angiographic success (core lab)	65 (97%)	40 (95%)	0.64
Clinical Success	55 (79%)	51 (84%)	0.51
Pre Thrombus Burden (%)	99 ± 6	98 ± 10	0.63
Residual Thrombus Burden (%)	19 ± 22	13 ± 21	0.18
Freedom from Events 30 Days	53 ± 13	55 ± 13	0.54
180 Days	16 ± 13	26 ± 14	0.54

Conclusions: Mechanical thrombectomy using the AngioJet® catheter provides an alternative percutaneous technique for treatment of acutely thrombosed hemodialysis A-V grafts and peripheral vessels and is equally effective as surgical Fogarty balloon embolectomy.

1008-165 Percutaneous Hydrodynamic Thrombectomy With the Use of the Hydrolyser System

M. Henry, M. Amor, I. Henry, J.M. Porte, O. Tricoche, E. Le Borgne. *UCCI, Polyclinique Essey-les-Nancy, France*

Purpose: To present our clinical experience with a new mechanical hydrodynamic thrombectomy system (Hydrolyser), using the Venturi effect. This device was applied for thrombus removal in native arteries, arterial grafts, venous system and pulmonary arteries.

Material and Methods: The Hydrolyser, a 7 F, double lumen, over the wire catheter has been used in 50 patients (M: 29, F: 21), mean age: 66.2 ± 13.1 yrs (40–90), with recent thromboses. Occlusion time ranged from 1 to 30 days (mean 8.2 ± 7.3 days), thrombus length, from 4 to 35 cm (mean: 17.7 ± 10.2 cm). Thrombus' location: native arteries (n = 35: femoropop: 28, iliac: 7), arterial grafts (n = 9), superior vena cava (n = 2), axillary vein (n = 2), pulmonary artery (n = 2). Approach ways: arterial femoral antegrade (n = 22), retrograde (n = 7), contralateral (n = 14), popliteal arterial (n = 1), venous femoral (n = 5), venous humeral (n = 1).

Results: Technical success in 41 pts (82%): native arteries (27/35) (77%), arterial graft (8/9) (89%), pulmorany artery (2/2), superior vena cava (2/2), axillary vein (2/2). Thrombus estimated angiographically to be removed by the Hydrolyser: 72.5 ± 22%. Adjunctive therapy: angioplasty (n = 38, 19 immediate stents implantations), thromboaspiration (n = 17), reduced time fibrinolysis (n = 11). 1 complication: distal embolism cured by thromboaspiration. In 9 pts the procedure failed, requiring surgery (bypass or Fogarty). At 30 days, 37 vessels remained patent (74%).

Conclusion: The Hydrolyser system is a promising concept for percutaneous thrombectomy. It is quick, reliable, efficient and can be an alternative to thrombolysis and surgical thrombectomy.

TUESDAY POSTER

1009 Epidemiology: Left Ventricular Function

Tuesday, March 18, 1997, Noon–2:00 p.m.
Anaheim Convention Center, Hall E
Presentation Hour: 1:00 p.m.–2:00 p.m.

1009-129 Preserved Left Ventricular Function in the Post Myocardial Infarction Patient is Predicted by a Simple Clinical Rule

K. Tobin, K. Eagle, D. Karavite, W.W. O'Neill, C.L. Grines. *William Beaumont Hospital, Royal Oak, MI, USA, Univ. of Michigan Heart Care Outcomes Assessment Team, Ann Arbor, MI, USA*

In retrospective studies we have shown that if a myocardial infarction (MI) patient meets 4 clinical and/or ECG criteria, ejection fraction (EF) is ≥ 40% with a positive predictive value (PPV) of 0.86 to 0.98. These criteria are (1) no history of CHF, (2) ECG without LBBB, pacing, or LVH with strain, (3) index MI not an anterior with Q-wave or ST elevation, (4) no prior Q-wave MI outside current MI zone. In this study we sought to validate the clinical rule in a selected cohort of 385 acute MI patients prospectively enrolled in the PAMI-1 reperfusion trial and to determine whether timing of post-MI EF assessment affected the accuracy of the clinical rule. All patients had ≥ one EF measurement (contrast ventriculography or gated blood pool scan) within the first 24 hours of MI and 219 had a follow-up gated blood pool scan at 6 weeks. 385 patients were studied; average age 60 years, 74% were male, 46% were treated with primary PTCA and 54% with TPA, and 61% of patients had anterior MI. The clinical rule predicted 233 patients would have an acute EF ≥ 40%, and 217 were correctly classified; a PPV of 0.93. Among 219 patients who also had a late gated blood pool scan, the clinical rule predicted that 141 patients would have an LVEF ≥ 40%, and 132 were correctly classified; a PPV of 0.94. *Conclusion:* This study demonstrates that the routine application of 4 clinical and ECG criteria are able to predict acute and 6 week LVEF with a PPV of 0.93. These data suggest that among patients undergoing acute reperfusion, it is conceivable that as many as 60% could forgo routine LVEF assessment, resulting in a substantial cost saving.

1009-130 A Population Survey of the Incidence and Aetiology of Heart Failure

M.R. Cowie, H. Penston, D.A. Wood, A. Coats, S. Thompson, P.A. Poole-Wilson, G.C. Sutton. *Cardiac Medicine, National Heart & Lung Institute, London, UK, Imperial College of Medicine, London, UK, Hillingdon Hospital, Uxbridge, London, UK*

The object of this community survey was to describe the contemporary incidence and aetiology of heart failure. New cases of heart failure presenting to the 81 general practitioners (GP's) and a district general hospital serving a population of 151 000 were identified prospectively over 15 months. Cases were identified through a daily open-access heart failure clinic to which GP's referred all new cases of suspected heart failure and from hospital admissions. Following a standardised interview, physical examination, ECG, CXR and echocardiogram all cases were reviewed by a panel of 3 cardiologists who determined whether the definition of heart failure was met, and aetiology. 170 new cases of heart failure were identified in the district with a median age at presentation of 75 years. The crude incidence rate was 0.9 cases per 1000 population per annum, rising from 0.2 cases/1000/p.a. in those aged 35–44 years to 11.4 cases/1000/p.a. in those aged 85 years and over, with a higher incidence in men than women at all ages. 35 (21%) cases were identified through the heart failure clinic, the remainder being acute hospital admissions. The aetiologies were ischaemic heart disease (36%), hypertension (15%), atrial fibrillation alone (8%), valve disease (6%) and other (6%). In 29% of cases the aetiology could not be determined from the history, examination and above investigations. Within this population the incidence of heart failure rises dramatically with age, with the majority of cases arising in the elderly. Most cases present acutely to hospital, and ischaemic heart disease is the single most common aetiology.

1009-131 Characterization of Left Ventricular End Systolic Stress in Young Adults: The CARDIA Study

N. Santo-Domingo, T. Kurosaki, C.L. Reid, M. Orlov, A.-M.A. Hsieh, J.M. Gardin, for the Coronary Artery Risk Development in Young Adults Group. *University of California, Irvine, Orange, CA, USA*

Left ventricular end-systolic stress (LVESS) is a measure of LV afterload and results in increased LV mass. LVESS (and LV mass) has been found to be a predictor of cardiovascular morbidity and mortality in middle aged and elderly populations. However, the relation of LVESS to race, gender, anthropometric